KEYSIGHT TECHNOLOGIES (AGILENT HP)

16822A

The Keysight Technologies (Agilent) 16822A is a portable logic analyzer integrated with a built-in 48-channel pattern generator. It features 68 logic analysis channels, a 15-inch color display with optional touch screen, and scalable acquisition memory depths up to 32 M samples. This instrument allows engineers to perform both digital stimulus and response analysis within a single, unified portable platform.

SPECIFICATIONS

General

Interfaces	LAN (10/100/1000 Mb/s), 6 x USB 2.0 (2 front, 4 rear), 15-pin VGA output, External Trigger BNC input/output
Display	15.0-inch color active matrix LCD with optional touch screen, 1024 x 768 (XGA) resolution

Logic Analysis Channels and Input Characteristics

Number of Logic Channels	68
Threshold Voltage Range	-5.0 V to +5.0 V (10 mV increments)
Maximum Input Voltage	±40 V peak

State Analysis (Synchronous Acquisition)

Maximum State Clock Speed	250 MHz (standard), 450 MHz (with State Speed Option 450)
Maximum State Data Rate	250 Mb/s (standard), 500 Mb/s (with State Speed Option 450)
Number of State Clocks	4
State Clock Qualifiers	4
Auto-Calibration Support	Yes (eye finder automatically adjusts setup/hold)

Timing Analysis (Asynchronous Acquisition)

Maximum Timing Sample Rate (Half Channel)	1.0 GHz
Maximum Timing Sample Rate (Full Channel)	500 MHz
High-Speed Timing Zoom Sample Rate	4.0 GHz (250 ps resolution)
High-Speed Timing Zoom Memory Depth	64K samples
Standard Memory Depth	1 M samples (Option 001)
Maximum Upgradeable Memory Depth	32 M samples (Option 032)
Transitional Timing Sample Rate	500 MHz

Pattern Generator (Stimulus Specifications)

Maximum Clock Speed (Pattern Generator)	300 MHz (half-channel), 180 MHz (full-channel)
Supported Vector Widths (Pattern Generator)	Up to 48-bit wide patterns

Logic Analyzer Performance

Threshold Setting Resolution	10 mV

TECHNOLOGY

Digital Signal and Logic Analysis

APPLICATIONS

Digital System Verification, Bus Troubleshooting, Hardware-Software Integration, Stimulus-Response Testing